

Application No. 10/633,939  
Amendment dated April 6, 2005  
Reply to Office Action of March 16, 2005  
Express Mail No. EV 597771811 US

**Amendments to the Claims:**

1. (Original) A drive mechanism for positioning a telescope coupled with a mount movable about at least one axis, the drive mechanism comprising:

- an axial shaft defining the axis;
- a drive gear centered about the axial shaft;
- a drive motor for driving the drive gear; and
- a clutch mechanism for engaging the drive motor when moving the mount using the drive motor and for disengaging the drive motor when moving the mount manually, thereby avoiding damage to the drive motor.

2. (Original) The drive mechanism as set forth in claim 1, wherein the clutch mechanism includes a low friction material interposed between the drive gear and the mount, wherein the low friction material provides sufficient friction to engage the drive gear with the mount when moving the mount using the drive motor but slips to disengage the drive gear from the mount when moving the mount manually.

3. (Original) The drive mechanism as set forth in claim 2, further including at least three raised contact points supporting the drive gear, wherein the low friction material is interposed between the drive gear and the raised contact points.

4. (Original) The drive mechanism as set forth in claim 1, further including one or more spring elements associated with the axial shaft and providing compression on the drive gear to assist in proper operation of the clutch mechanism.

5-7. (Cancelled)

8. (Original) A mount for supporting a telescope, wherein the mount is movable about an axis, the mount comprising:

- a drive mechanism for moving the mount about the axis, the drive mechanism including-
  - an axial shaft defining the axis;
  - a drive gear centered about the axial shaft;
  - a drive motor for driving the drive gear; and
  - a clutch mechanism for engaging the drive motor when moving the mount using the drive motor and for disengaging the drive motor when moving the mount manually, thereby avoiding damage to the drive motor.

9. (Original) The mount as set forth in claim 8, wherein the clutch mechanism includes a low friction material interposed between the drive gear and the mount, wherein the low friction material provides sufficient friction to engage the drive gear with the mount when moving the mount using the drive motor but slips to disengage the drive gear from the mount when moving the mount manually.

10. (Original) The mount as set forth in claim 9, further including at least three raised contact points supporting the drive gear, wherein the low friction material is interposed between the drive gear and the raised contact points.

11. (Original) The mount as set forth in claim 8, further including one or more spring elements associated with the axial shaft and providing compression on the drive gear to assist in proper operation of the clutch mechanism.

12. (Original) A telescope system comprising:

a telescope;

a mount adapted to support the telescope, wherein the mount is movable about at least an azimuth axis and an altitude axis;

a first drive mechanism for moving the mount about the azimuth axis, the first drive mechanism including -

a first axial shaft defining the azimuth axis,

a first drive gear centered about the first axial shaft,

a first drive motor for driving the first drive gear, and

a first clutch mechanism for engaging the first drive motor when moving the mount using the first drive motor and for disengaging the first drive motor when moving the mount manually, thereby avoiding damage to the first drive motor; and

a second drive mechanism for moving the mount about the altitude axis, the second drive mechanism including -

a second axial shaft defining the azimuth axis,

a second drive gear centered about the second axial shaft,

a second drive motor for driving the second drive gear, and

a second clutch mechanism for engaging the second drive motor when moving the mount using the second drive motor and for disengaging the second drive motor when moving the mount manually, thereby avoiding damage to the second drive motor.

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13. (Original) The telescope system as set forth in claim 12, wherein the first and second clutch mechanisms each include a low friction material interposed between their respective first or second drive gear and the mount, wherein the low friction material provides sufficient friction to engage the respective first or second drive gear with the mount when moving the mount using the respective first or second drive motor but slips to disengage the respective first or second drive gear from the mount when moving the mount manually.

14. (New) A drive mechanism for positioning a telescope coupled with a mount movable about at least one axis, the drive mechanism comprising:

an axial shaft defining the axis;

a drive gear centered about the axial shaft;

a drive motor for driving the drive gear; and

a low friction material interposed between the drive gear and the mount, thereby providing sufficient friction to engage the drive gear with the mount when moving the mount using the drive motor but otherwise slipping to disengage the drive gear from the mount when moving the mount manually.

15. (New) The drive mechanism as set forth in claim 14, further including at least three raised contact points supporting the drive gear, wherein the low friction material is interposed between the drive gear and the raised contact points.

16. (New) The drive mechanism as set forth in claim 14, further including one or more spring elements associated with the axial shaft and providing compression on the drive gear to assist in proper operation of the clutch mechanism.